



UN COPUOS: Long-term Sustainability of Space Activities

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**“Space for Human and Environmental Security in the Americas: Space policy, Long-term
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Key Observations

- Space utilization growing among developed and developing countries
- Space systems are part of the of the global critical infrastructure
- Cooperation is necessary
- Need for safe & responsible behavior to protect space for current and future operations

Questions to Consider

- Governance structures and implementation
 - What types of frameworks need to be developed for enhanced security, including space situational awareness?
 - What will be the proper balance of national and international interests?
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National Space Policy of the United States (2010)

- International Cooperation in long-term preservation of the space environment for human activity and use;
 - Promote the adoption of policies internationally that facilitate full, open, and timely access to government environmental data;
 - Promote appropriate cost- and risk-sharing among participating nations in international
 - The United States will pursue bilateral and multilateral transparency and confidence-building measures to encourage responsible actions in, and the peaceful use of, space

U.S. Space Policy (Cont.)

- For the purposes of minimizing debris and preserving the space environment for the responsible, peaceful, and safe use of all users, the United States shall
 - Lead the continued development and adoption of international and industry standards and policies to minimize debris, such as the United Nations Space Debris Mitigation Guidelines;
 - Develop, maintain, and use space situational awareness (SSA) information from commercial, civil, and national security sources to detect, identify, and attribute actions in space that are contrary to responsible use and the long-term sustainability of the space environment;
 - Continue to follow the United States Government Orbital Debris Mitigation Standard Practices, consistent with mission requirements and cost effectiveness, in the procurement and operation of spacecraft, launch services, and the conduct of tests and experiments in space;
 - Pursue research and development of technologies and techniques, through the Administrator of the National Aeronautics and Space Administration (NASA) and the Secretary of Defense, to mitigate and remove on-orbit debris, reduce hazards, and increase understanding of the current and future debris environment

UN Committee on the Peaceful Uses of Outer Space STSC

- Agenda item on the Long-term Sustainability of Space Activities
 - Initiative proposed by France in UNCOPUOS
 - Item adopted in 2009 for work in STSC
 - Close coordination with commercial satellite operators, standards organizations, and key members of the Committee
 - Working group established in 2010 under leadership of Peter Martinez (South Africa)
 - Conclude work in 2012 /13 with adoption of best practices guidelines
- Four expert working groups
 - A. Sustainable space utilization supporting sustainable development on Earth
 - B. Space debris, space operations and tools to support collaborative space situational awareness
 - C. Space weather
 - D. Regulatory regimes and guidance for actors in the space arena

Group A: Sustainable Space Utilization

Supporting Sustainable Development on Earth

- Focused on issues of sustainable development through the identification of four strongly interconnected clusters of drivers of unsustainability:
 - a) Inequalities of development, poverty, hunger and deficiencies in health and well-being;
 - b) Unsustainability of energy systems;
 - c) Climate change;
 - d) Food insecurity, biodiversity loss, water scarcity and scarcity of other natural resources.

Group B: Space Debris, Space Operations and Tools to Support Collaborative Space Situational Awareness

Preliminary topics for consideration by Expert Group B will include:

1. Space debris (measures to reduce, technical developments, re-entry)
2. Space operations (conjunction assessment, collision avoidance)
3. Tools to support collaborative space situational awareness (Collection, sharing and dissemination of orbital data on functional and nonfunctional space objects)

Group C: Space Weather

- Identification of space weather related risks
- Current practice and procedures
 - Observations
 - Models
 - Tools of Space weather prediction
 - Engineering approach to mitigate space environment effects
- Capabilities to provide a comprehensive network to support space weather services
- Recommendation on coordination among States on space weather observations to safeguard space activities
- Key findings and technical standards regarding space weather

Group D: Regulatory Regimes and Guidance for Actors in the Space Arena

- National regulatory frameworks critical to sustain the space environment
- Increase of private space activities has caused the elaboration and promulgation of domestic legislations
- Group efforts focused on examining frameworks, principles and procedures to identify best practice models that enhance the long term sustainability of space activities

UNCOPUOS Legal Subcommittee

International Mechanisms for Cooperation

- Agenda item entitled 'Review of International Mechanisms for Cooperation in the Peaceful Exploration and Use of Outer Space'
 - Co-sponsored by: China, Ecuador, Japan, Peru, Saudi Arabia and the United States
 - 5 year work plan to begin in 2013
 - LSC will take stock of the various mechanisms employed by Member States to conduct international collaboration with a view to identifying common principles and procedures.
 - Helpful to Member States as they choose relevant mechanisms to facilitate future cooperative endeavors, particularly for long-term sustainability of space activities.

International Mechanisms for Cooperation (Cont.)

- The multi-year work plan:
 - Year 1: Exchange of information on the range of existing international space cooperation mechanisms;
 - Year 2: Continue exchange of information, establish working group, request Secretariat to prepare a report categorizing the range of cooperation mechanisms;
 - Year 3: Exchange of additional information, taking into account the report by the Secretariat. Request the Secretariat to prepare a report identifying the legal issues commonly addressed in existing agreements;
 - Year 4: Working group reviews the report by the Secretariat and begins drafting its report
 - Year 5: Working Group finalizes its report.